

in question are assumed to be using Type 1 stairways. No consideration is given to any Type 2 or 3 stairways that may be available. If more than one Type 1 stairway serves a particular Main Vertical Zone, the persons shall be distributed between the stairways dependent upon the arrangements, and the stairways shall be dimensioned accordingly. If in the normal operation of the vessel, a Type 1 stairway is intended for a greater number of persons than given by the foregoing, the larger number shall be used.

(5) Types 2, 3, and 4 stairways shall be dimensioned on a deck-by-deck basis as described in this paragraph. In determining the number of persons using the stairways, the normal operation of the vessel shall be the determining factor. In this respect, if any particular stairway forms part of a normal debarkation route, the number of persons using the stairway for that purpose shall be considered.

(q) All types of stairways designed with a broken flight between any two decks shall conform to the additional requirements of this paragraph.

(1) Any interruption of the slope or change of direction of the stairway shall be accomplished by means of an intermediate landing of rectangular or

nearly rectangular shape based on the actual dimensions of the stairs landing thereon.

(2) Each set of stairs of a broken flight shall be dimensioned independently, and shall conform to the minimum stair widths given in table 72.05-20(p).

(r) Landings for stairways shall be provided in accordance with the applicable requirements of this paragraph.

(1) For all types of stairways, at the top and bottom of each flight of stairs, there shall be a clear landing having an area at least equal to the square of the actual stair tread width.

(2) For Type 1 stairways, there shall be provided within the enclosure at each deck level a landing having a minimum clear area in square feet, exclusive of the stairs, equal to 1.2 times the number of persons from that deck using the stairway.

(3) Where an aisle around a stairway is required due to the relationship of the flights, such aisle shall have a clear width at all points at least equal to the actual stair tread width.

(s) The total clear width of doors to stairways shall be as set forth in table 72.05-20(s), and shall meet all of the other applicable requirements of this paragraph.

TABLE 72.05-20(s)

| Type of stairway | Primary use | Minimum clear opening, in inches, of doors to stairways based on number of persons served by doors—Number of persons (<i>N</i>) | | | | | |
|------------------|-------------------------|---|-------|-------|-------|-------|----------------------------|
| | | 1-10 | 11-20 | 21-30 | 31-40 | 41-50 | Over 50 |
| 1 | Passenger or crew | 28 | 30 | 32 | 34 | 36 | ¹ 0.75 <i>N</i> |
| 2 or 3 | Passenger | 28 | 30 | 32 | 34 | 36 | 36 |
| 2 or 3 | Crew | 28 | 30 | 30 | 30 | 30 | 30 |

¹ Obtain clear opening in inches by multiplying the number of persons served (*N*) by 0.75.

(1) The dimensioning of doors shall be based on the same fundamentals as described in paragraphs (p)(2) through (5) of this section for stairways. However, the number of people involved for a particular door shall be determined from the arrangements, each door being calculated independent of any other doors to the stairway at the same level.

(2) In no case shall a clear door width be less than 28 inches.

(3) On the Embarkation Deck, each Type 1 stairway shall provide at least

44 inches of exit door width to each side of the vessel. Exit may be provided directly to the weather or indirectly by passageways and/or corridors which lead to the weather.

§ 72.05-25 Doors, other than watertight.

(a) The general requirement for doors, other than watertight doors, are as follows:

(1) All doors shall be capable of operation from either side by 1 person.

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(2) In public spaces, stairway enclosures, corridors, etc., all doors shall open in the direction of escape where practicable.

(3) If it is desired to use decorative doors in addition to those required, they shall be constructed of approved incombustible materials and shall not interfere with the normal operation of the required doors, and shall open in the same direction if the required doors are in a main avenue of escape.

(4) For the purpose of this subpart, all glass permitted in doors shall be at least ¼-inch thick. However, greater thickness may be required for strength purposes in certain locations. Except for hardwood doors permitted by paragraph (b)(8) of this section, all glass shall be fitted in steel or equivalent metal frames and shall be retained by steel or equivalent metal glazing beads or angles.

(5) Where wire-inserted glass is required, and the single wire type is employed, the strands shall run horizontally and shall be not more than 2 inches apart.

(6) Where hose ports are fitted, they shall be cut in the lower corner of the door on the side opposite the hinge so that if the hose is passed through the doorway when the door is open, it may be closed over the hose. The cut for the hose port should be approximately 6 inches square. A hinged or pivoted steel or equivalent metal cover shall be fitted in the cut, equipped with a bullet catch or similar method of fastening which will permit easy and automatic operation of the hinged cover.

(7) Combustible veneers may be used in doors where permitted for, and subject to the same conditions as, the bulkheads in which the doors are hung.

(8) The locking of doors may be permitted, except as noted in § 72.10-20.

(b) Doors in "A" Class bulkheads shall meet the following requirements:

(1) Doors in bulkheads required to be Class A-60, A-30, or A-15 shall be of hollow steel or equivalent metal construction solidly filled with approved structural insulation capable of meeting the requirements for a Class A-15 bulkhead.

(2) Doors in bulkheads required to be Class A-0 shall be of solid or hollow steel or equivalent metal construction

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capable of meeting the requirements of a Class A-0 bulkhead.

(3) Doors shall have a latch with a minimum throw of ¼ inch which can be operated from either side of the door. Double swing doors, where permitted for the proper utility of the space, may have the latch normally inoperative.

(4) Except as noted in paragraph (b)(8) of this section, doors may be fitted with not more than 100 square inches of glass, which shall be of the wire inserted type.

(5) Vent grilles or louvers shall not be used in doors of this type.

(6) The bottoms of doors may be undercut not to exceed ½ inch above the door sill or top of approved deck covering. Rugs, and carpets, shall not pass through doorways, but linoleum and similar coverings may do so.

(7) Door frames shall be of rigid construction, and shall provide at least a ½ inch door stop at the sides and top, except:

(i) Double doors capable of independent operation and latching may have a clearance between the doors not to exceed ⅛ inch. However, if one door must always be closed first, a doorstop of at least ½ inch shall be provided for the second door.

(ii) Double swing doors, where permitted, may have a maximum clearance of ⅛ inch at the tops and sides.

(8) Doors opening out onto open decks shall either meet the applicable requirements of this paragraph, or they may be of hardwood having a minimum thickness of 1¾ inches. In any case, no restriction as to the area of glass will be made for such doors insofar as this subpart is concerned. Only glass of the wire-inserted type may be fitted in such doors opening onto safety areas from accommodation spaces containing combustible type furniture and service, cargo, and machinery spaces.

(9) Doors in stairway enclosures and Main Vertical Zone bulkheads shall, in addition to meeting the requirements of this paragraph, also meet the following requirements:

(i) Doors, other than those which are normally locked, such as from staterooms, fan rooms, lockers, etc., shall be of the self-closing type capable of closing against a 3½ degree list, and

such doors shall be numbered in accordance with § 78.47-35 of this subchapter.

(ii) All doors, except those that are kept normally closed, shall be of a type which are capable of release from the control station and from a position at the door. The release mechanism shall be so designed that the door will automatically close in the event of disruption to the control system; however, approved power operated watertight doors will be considered acceptable for this purpose. Holdback hooks, or other means of permanently holding the door open, not subject to control station release, will not be permitted. When double swing doors are permitted, they shall have a latch arrangement which is automatically engaged by the operation of the door release system.

(iii) Double doors shall be so arranged that either door may be closed and latched independently.

(iv) For additional requirements for stairway doors, see § 72.05-20(s).

(c) Doors in "B" Class bulkheads shall meet the following requirements:

(1) Doors may be of solid or hollow steel or equivalent metal construction or may be of steel or equivalent metal frame with glass panes or may be of approved incombustible materials of such construction as specifically approved by the Commandant.

(2) No restriction as to the area of glass will be made for such doors, but all glass shall be of the wire-inserted type.

(3) The lower half of such doors may contain vent grilles or louvers with a net area not to exceed 2 square feet.

(4) Doors shall have a latch with a minimum throw of $\frac{3}{8}$ inch which can be operated from either side of the door. Double swing doors, where permitted for the proper utility of the space, may have the latch normally inoperative.

(5) The bottoms of doors may be undercut not to exceed 1 inch above the door sill or top of approved deck covering. Rugs and carpets shall not pass through doorways but linoleum and similar covering may do so.

(6) Door frames shall be of rigid construction, and shall provide at least a $\frac{1}{2}$ inch doorstop at the sides and top, except:

(i) Double doors capable of independent operation and latching may have a clearance between the doors not to exceed $\frac{1}{8}$ inch. However, if one door must always be closed first, a door stop of at least $\frac{1}{2}$ inch shall be provided for the second door.

(ii) Double swing doors, where permitted, may have a maximum clearance of $\frac{1}{8}$ inch at the tops and sides.

(d) Doors in bulkheads required to be Class C shall be of approved incombustible materials.

§ 72.05-30 Windows and airports.

(a) For the purpose of this subpart, all glass in windows or airports shall be at least $\frac{1}{4}$ inch thick. However, greater thickness may be required for strength purposes in certain locations. All glass shall be fitted in steel or equivalent metal frames and shall be retained by steel or equivalent metal glazing beads or angles.

(b) Where wire-inserted glass is required, and the single wire type is employed, the strands shall run horizontally and shall be not more than 2 inches apart.

(c) Windows in Class B-0 bulkheads shall be fitted with wire inserted glass. Such windows opening onto passageways may not extend below the normal height of the storm rails.

(d) Windows in Class B-15 bulkheads shall be fitted with wire inserted glass. In addition, such windows shall be fitted with a suitable steel or equivalent metal shutter capable of being operated manually as well as automatically by means of a fusible link.

(e) Windows in interior "A" Class bulkheads shall be fitted with suitable steel or equivalent metal shutter capable of being operated manually as well as automatically from the control station by the same system used for the fire doors as noted in § 72.05-25(b)(9)(ii). The metal shutter shall be insulated to meet the applicable bulkhead requirements.

(f) Windows or air ports opening onto lifeboat embarkation or lowering spaces from service, cargo, or machinery spaces, or from control or accommodation spaces other than those containing only incombustible veneers and trim and fire resistant furnishings, shall be fitted with wire inserted glass.